

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

JULIAN RUBINSTEIN, BARBARA ANTINORO
and DAVID FLEER Individually and on Behalf of
All Others Similarly Situated,

Plaintiffs,

v.

CREDIT SUISSE GROUP AG, CREDIT SUISSE
AG, CREDIT SUISSE SECURITIES (USA) LLC,
TIDJANE THIAM and DAVID R. MATHERS,

Defendants.

Case No. 1:19-cv-01069-VEC

CLASS ACTION

AMENDED COMPLAINT¹

DEMAND FOR JURY TRIAL

Lead Plaintiff Julian Rubinstein, Barbara Antinoro and David Fleer (“Plaintiffs”) allege the following based upon personal knowledge and belief as to their own acts, and, as to the rest of the allegations herein, based upon the investigation of Plaintiffs’ counsel, including a review of Securities and Exchange Commission (“SEC”) filings relating to the VelocityShares Daily Inverse VIX Medium-Term Exchange Traded Notes (“ZIV”), press releases, analyst reports, market data, media reports and other publicly disclosed reports and information about ZIV and other similar or related securities. Plaintiffs believe that substantial additional evidentiary support will exist for the allegations set forth herein after a reasonable opportunity for discovery.

NATURE OF THE ACTION

1. This action asserts federal securities law claims on behalf of all persons who purchased or acquired ZIV pursuant or otherwise traceable to the Registration Statement (defined below), and suffered damages from Defendants’ failure to disclose that the amount of money invested in ZIV and similar trading strategies by other market participants would, independently,

¹ Defendants consented, in writing, to the filing of this Complaint, as shown by Exhibit 1 hereto.

cause a deviation in the price of VIX Futures (as defined below) and that the underlying market in VIX Futures was subject to being manipulated in a manner disadvantageous to ZIV investors.

JURISDICTION AND VENUE

2. The claims alleged herein arise under the Securities Act of 1933 (the “Securities Act”) over which this Court has jurisdiction pursuant to 28 U.S.C. §1331 and Section 22 of the Securities Act, 15 U.S.C. §77v.

3. Venue is proper in this District pursuant, 28 U.S.C. §1391(b) and Section 22 of the Securities Act. Many of the acts alleged herein, including the dissemination of materially false and misleading information, occurred in substantial part in this District. ZIV is listed and trades under the ticker symbol “ZIV” on the Nasdaq Stock Market (“NASDAQ”), which is found in this District.

4. In connection with the acts alleged in this Complaint, Defendants, directly or indirectly, used the means and instrumentalities of interstate commerce, including, but not limited to, the mails, interstate telephone communications, and the facilities of the national securities markets.

PARTIES

Plaintiffs

5. Lead Plaintiffs Julian Rubinstein, Barbara Antinoro and David Fleer purchased ZIV pursuant or traceable to the Registration Statement (defined below), as set forth in certifications previously filed with the Court (*see* ECF Nos. 1-1 and 10-2) and incorporated herein by reference.

Defendants

6. Defendant Credit Suisse Group AG is a Swiss multinational financial service holding company headquartered in Zurich, Switzerland. It owns 100% of the equity interest in Defendant Credit Suisse AG, its primary operating subsidiary.

7. Defendant Credit Suisse AG, the direct bank subsidiary of Credit Suisse Group AG, is domiciled in Zurich, Switzerland. Credit Suisse AG issued ZIV, for which it received millions of dollars in offering proceeds. Because Credit Suisse Group AG and Credit Suisse AG are, as a practical matter, indistinguishable for purposes of this Complaint, both entities are referred to herein as “Credit Suisse.”

8. Defendant Credit Suisse Securities (USA) LLC (“CSSU”) is a United States-based broker-dealer for Credit Suisse, headquartered in New York, New York. Its equity is 100% owned by Credit Suisse. CSSU served as an underwriter and placement and redemption agent for ZIV, for which it received fees and commissions.

9. Defendant Tidjane Thiam (“Thiam”) has served as the CEO of Credit Suisse and as a member of the Executive Board at Credit Suisse since 2015. Defendant Thiam was also a member of the Capital Allocation and Risk Management Committee (“CARMC”), which consisted of Credit Suisse’s most senior officers, including Defendants Thiam and Mathers, was responsible for actively monitoring risk at the highest level, recommending risk limits to the Board, and allocating risk limits among Credit Suisse’s different lines of business, and any breach of those limits resulted in “immediate notification” to Defendant Thiam.

10. Defendant David R. Mathers (“Mathers”), at all times relevant to this action, served as the CFO of Credit Suisse and a member of the Executive Board. Defendant Mathers was also a member of the CARMC and the chair of Credit Suisse’s Valuation Risk Management Committee.

11. Defendants Mathers and Thiam are collectively referred to herein as the “Individual Defendants” and with all other defendants are referred to as “Defendants.”

SUBSTANTIVE ALLEGATIONS

The Standard & Poor’s 500 and SPX Options

12. The Standard & Poor’s 500 Index (“SPX”) is an index that tracks the performance of 500 large market capitalization U.S. publicly traded companies based on the total market value of their outstanding shares. SPX, is generally perceived to be the most representative stock market index because it covers approximately 80% of available market capitalization and comprises a large number of stocks across different sectors of the economy (*e.g.*, information technology, financials, health care, consumer discretionary, industrials, consumer staples, energy, utilities materials and real estate).

13. Investors often hedge their investment positions by purchasing or selling options on the SPX (“SPX Options”), with those options generally only exercisable on the expiration date which is the third Friday of the expiration month. Since the SPX is not a single tradeable security, SPX Options are cash settled. A call option on the SPX represents a bullish or optimistic bet on the future direction of the SPX, entitling the holder to purchase the SPX at a set price on the expiration date. If the SPX is trading at a higher price than the strike price (*i.e.*, the price at which the holder could theoretically purchase the SPX), a call holder receives the difference between the two values. If, however, the SPX is trading at a price lower than the strike price then the call option expires worthless. In contrast, a put option represents a bearish or negative bet on the future direction allowing the holder to force the counterparty to purchase the SPX at the pre-set strike price. Accordingly, if the SPX is trading lower than the strike price on the expiration date, then the put holder receives the difference between the strike price and the

price of the SPX. If, however, the SPX is trading at a price higher lower than the strike price then the put option expires worthless.

The VIX Index, Futures and Options

14. In 1993, the Chicago Board of Options Exchange (“CBOE”) created a theoretical measurement of the market expectations of near-term volatility conveyed by SPX Option prices, called the CBOE Volatility Index (“VIX Index” or the “VIX”). The VIX Index, popularly referred to as a “fear index”, represents investors’ expectation of future volatility in the SPX or the stock market. The VIX Index, based on the real time pricing of SPX Options, was, at relevant times, calculated by averaging the weighted prices of call and put options over a wide range of strike prices.

15. The CBOE also created VIX futures contracts (“VIX Futures”), which are settled on a single expiration date based upon the difference between the VIX Index and the strike price of the futures contract. VIX Futures allow investors to invest in or hedge against market volatility as represented by the VIX Index. VIX Futures generally are worth \$1000 times the level of the VIX, and trade over seven months of expiration. VIX Futures generally expire on the Wednesday 30 days before the corresponding SPX expiration date.

16. VIX options are like standard equity options but are based on the price of VIX Futures. VIX options are European-style options, which means they can be exercised only at expiration (whereas standard equity options can be exercised on any until their expiration day). VIX options are cash settled (at \$100 times the intrinsic value at expiration), with in-the-money options settling to the same settlement reference as VIX futures.

ZIV is Designed to Track the Inverse Performance of the S&P 500 VIX Mid-Term Futures Index

17. Investors cannot invest directly in the VIX but can purchase either VIX Futures or VIX options. An alternative to direct investment in VIX Futures and VIX options is to purchase exchange traded products (“ETP”) that are typically linked to a futures index created by Standard & Poor’s. The most popular of those indices, the S&P 500 VIX Short-Term Futures Index (Ticker: SPVIXSTR), popularly referred to as the “VIX Index”, was launched in 2008. SPVIXSTR utilizes prices of the next two near-term VIX futures contracts to replicate a position that rolls the nearest month’s VIX futures to the next month on a daily basis in equal fractional amounts. This results in a constant one-month rolling long position in first and second month VIX futures contracts. Historically, the VIX Index has a negative correlation to the SPX and SPVIXSTR is considered a tool to hedge against the potential downside of the broad equity market.

18. The S&P 500 VIX Mid-Term Futures Index (Ticker: SPVIXMTR) measures the return of a daily rolling long position in the fourth, fifth, sixth and seventh month VIX Futures contracts. SPVIXMTR also has a negative correlation with the SPX, but because it measures the price of VIX Futures four to seven months into the future, it is less volatile than the VIX Index.

19. ZIV was created and issued by Credit Suisse as an ETN designed to inversely track the performance of SPVIXMTR, meaning that its value increased as the SPVIXMTR declined and, conversely, decreased in value when the SPVIXMTR rose. ZIV was one of several ETNs created by Credit Suisse (collectively the “CS ETNs”) designed to inversely track a VIX Index (an “Inverse” ETP).

20. The CS ETNs traded on the NASDAQ in three sessions: (i) the pre-market session from 4:00 a.m. to 9:30 a.m., (ii) the regular market session from 9:30 a.m. to 4:00 p.m., and (iii) the aftermarket session from 4:00 p.m. to 8:00 p.m. (all Eastern Time).

The VIX is Subject to Manipulation

21. Originally, four SPX options were used to calculate VIX and they were very close to being at-the-money, *i.e.*, close to the published VIX price, and as a result were the most liquid and costly options used. This made it more expensive for a hypothetical liquidity provider to replicate the VIX. In addition, the at-the-money VIX price changed constantly as the SPX moved making it impossible to predict with certainty which four options would be right at-the-money at any given time.

22. The CBOE changed the formula used to calculate the VIX by expanding the number of SPX options used in order to take account of up to one hundred thirty SPX options. This was purportedly done to provide greater liquidity through making the VIX easier to replicate in trading models, without knowing what the precise at-the-money price would be at the time of settlement.

23. The CBOE designed the new pricing process such that: (a) it did not conduct any averaging of the prices of the relevant trades; (b) it occurred during a short trading window; and (c) it gave excess weight to the cheapest kinds of trades. As a result, the new pricing procedure made the VIX settlement process dependent upon the value of thinly traded and illiquid out-of-the-money SPX Options that traded at far lower volumes than the VIX Futures and VIX Options. Thus, trading even a small number of out-of-the-money SPX Options could result in large differences in the settlement value of VIX Futures and VIX Options.

24. The ability to manipulate the VIX was thus amplified, because active trading in “strategy orders” for the relevant SPX Options must be submitted before 8:20 a.m. with the CBOE publishing information about the relevant SPX Options at 7:30 a.m. This meant that any market participant wishing to manipulate the price of VIX Futures only needed to move the market during a narrow trading period of less than an hour.

25. The reported VIX price could be affected and manipulated by placing bids on thinly traded out-of-the-money SPX options. Those bids did not have to be acted upon and could be withdrawn once they served their purpose of manipulating VIX pricing. Matthew Shapiro, a former CBOE employee responsible for designing the VIX, explained that traders could sell or buy thousands of SPX Options to manipulate VIX pricing. *See KeeneOn The Market.com Weekly CBOE Volatility INDEX (>VIX) Interview w/ Matt Shapiro* (July 12, 2012), https://youtube.com/watcch?v=ipeN_helJVY at 2:40.

26. Similarly, Matt Levine, a former Goldman Sachs banker explained the process as follows:

[I]f you are a trader who owns a lot of the market in VIX futures, you could push around a large dollar value of futures by trading a small dollar value in options. This is particularly true because the S&P option volume is divided among many strikes, and the illiquid deep out-of-the-money S&P 500 options have a big influence on the VIX: You can move the price of those options a lot with relatively small trades, and those price changes have a disproportionate effect on the VIX. . . . [Thus,] if you are going to manipulate a tradable market . . . then VIX looks pretty tempting.

Matt Levine, *VIX Trading, Hoaxes, and Blockchain* (May 24, 2017).

27. In May 2017, a research paper titled *Manipulation in the VIX?*, by Professor Griffin and Mr. Shams of the University of Texas, was first made available. That paper concluded:

First, at the exact time of monthly VIX settlement, highly statistically and economically significant trading volume spikes occur in the underlying SPX

options. Second, the spike occurs only in the OTM [out-of-the-money] SPX options that are included in the VIX settlement calculation and not in the excluded in-the-money (ITM) SPX options. Third, there is no spike in volume for the similar S&P 100 Index (OEX) or SPDR S&P 500 ETF (SPY) options that are unconnected to volatility index derivatives. Fourth, if traders sought to manipulate the VIX settlement, they would want to move the prices by optimally spreading their trades across the SPX strikes and increasing the number of trades in the deep OTM put options consistent with the VIX formula. Trading volume at settlement follows this pattern, whereas normally deep OTM options are rarely traded. Fifth, there are certain options that have discontinuously higher weight in the VIX formula but are otherwise very similar to other options. These options exhibit jumps in trading volume at settlement that are not present at normal times.

ZIV and Similar ETPs Require a Daily Rebalancing of Their Exposure to VIX Futures

28. ZIV, XIV and other similar ETPs engaged in a practice known as daily rebalancing in which, according to the prospectus, “the weight of each index component is [] adjusted every day to ensure that the change in total dollar exposure for the index is only due to the price change of each contract and not due to using a different weight for a contract trading at a higher price.” The size of the daily rebalance or sponsor hedges needed for inverse products such as ZIV is proportional to the assets under management (“AUM”) and the size of the movement in the SPVIXMTR, with larger movements requiring the largest rebalances or hedges.

29. Credit Suisse engaged in hedging to protect itself in the event CS Inverse ETN investors sought to redeem their CS Inverse ETNs, since Credit Suisse was obligated to pay the investor the value of the notes. Credit Suisse did so in part by holding short positions in VIX Futures, so that when VIX Futures prices dropped, Credit Suisse made money from the short positions, intended to offset the resulting higher XIV and ZIV prices, and thus higher redemption values, that Credit Suisse was required to pay CS Inverse ETN investors who wanted to redeem their notes.

30. As Credit Suisse and other issuers offered more and more ETPs and purchased more futures to hedge their ETP obligations, they inevitably pushed up the demand for, and thus

price of, those futures. As those futures' prices rose, the value of ZIV, XIV and other Inverse ETPs linked to VIX Futures fell, further increasing the demand to purchase VIX Futures, and further reducing the value of ZIV and other similar Inverse ETPs linked to SPVIXSTR and SPVIXMTR, until a balance was achieved.

31. Defendants had access to the information regarding the amount of Credit Suisse's hedging, and were able to observe changes to markets in hedging its ETP obligations as ETPs linked to VIX Futures proliferated because, among other things, Credit Suisse was among the largest markets participants offering ETPs linked to VIX Futures.

Historically VIX Futures Spiked Beyond Anticipated Levels with a Sudden Upturn in Volatility

32. During at least three occasions over the last ten years, market volatility spiked significantly and VIX Futures prices spiked at the end of the trading day in a manner disproportionate to what would normally be expected. These large price movements were caused in part by Credit Suisse and other volatility-related ETP issuers placing hedging trades to protect their balance sheets, *e.g.* buying VIX Futures to offset the risk posed by the Inverse ETPs they issued.

33. Between August 4, 2011 and August 8, 2011, there was a trading spike in the VIX. On August 4, 2011, XIV opened at \$14.83, and closed on August 8, 2011 at \$10, a decline of 32.57%, with the XIVIV—the Intraday Indicative Value—dropping 38.42% at one point. On or about August 24, 2015, there was another spike in afterhours resulting in XIV dropping more than 30% in afterhours trading. Also, on June 24, 2016, approximately 118,000 first and second-month VIX futures contracts traded in the aftermarket, which represented nearly a quarter of the entire first- and second-month VIX futures market. This huge volume caused a spike in VIX

Futures prices, resulting in a sharp drop in the XIV. From a close of \$30.05 on June 23, 2016, XIV dropped as low as \$20.79, or **30%**, during afterhours trading.

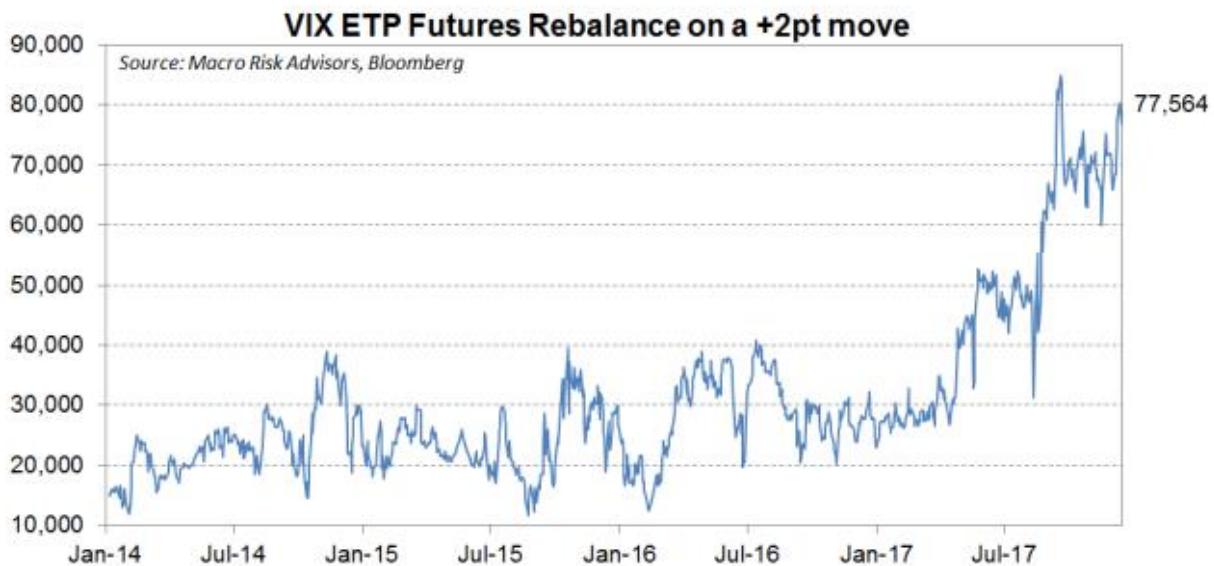
34. Similarly, on June 23, 2016, ZIV opened on June 24, 2016, at \$38.76, a decrease of over 6% from its prior close of \$41.37. Although that drop was only 6%, since then the amount of money placed in ZIV and other similar ETPs and hedging strategies relating to the SPVIXMTR increased dramatically especially compared to the overall trading volume of the VIX Futures upon which its price was based (see ¶¶38-46, *infra*), meaning the price-insensitivity of the necessary rebalancing would inevitably cause greater future price distortions.

ZIV and Similar ETPs Grew Significantly

35. Over the last several years, the United States stock market, as reflected by the SPX, had been experiencing a period of historically low volatility, causing ZIV, VIX and similar Inverse ETPs tied to the performance of VIX Futures to perform well. As a result, investors continued to pour money into volatility ETPs and trading strategies inversely tracking the various VIX Futures indices. For example, on January 26, 2018, there were issued and outstanding 2,498,000 shares of ZIV were issued and outstanding representing a considerable increase of almost 38% from the 1,813,000 Inverse VIX Medium Term notes issued and outstanding only seventeen months earlier on August 5, 2016.

36. Investments in volatility related ETPs were heavily skewed toward shorting volatility, as investors poured billions of dollars into bets that historic low volatility with the SPX had recently been experiencing would continue unabated. The significant growth of ZIV and other volatility related ETPs prior to and through February 5, 2018, pushed the size of their potential rebalancing requirements to unprecedented levels.

37. Thus, in early 2014, volatility related ETPs would have needed to collectively purchase approximately 15,000 VIX futures contracts to rebalance their portfolios if VIX futures rose by 2 points. By the summer of 2017, volatility-related ETPs would have needed to collectively purchase approximately 77,564 VIX futures contracts to rebalance their portfolios after the same 2-point increase in VIX futures. The following chart illustrates the increase in the number of VIX futures contracts that volatility-related ETPs would need to purchase following a 2-point increase in VIX futures, through the Summer of 2017:



The Proliferation of ETPs Tied to the VIX Set the Stage for Additional Market Distortion that Was Exacerbated by Daily Rebalancing

38. The proliferation of AUM in volatility-related products, relying on dynamic trading in the same VIX Futures and SPX option markets, created a liquidity risk ensuring that ZIV could not perform as expected in the face of significant market turbulence. There, simply, was not enough volume in the VIX Futures market and thus cost-insensitive sponsors seeking to hedge their risks moved the market significantly.

39. As summarized by a *Bloomberg* article published February 9, 2018, titled “Inverse Volatility Products Almost Worked”, should market turmoil arise it would be “unpleasant for Credit Suisse [] [because] [n]ot only does it have to buy a lot of futures right at the close, but also it *doesn't know how many futures it needs to buy*, because every time it buys futures it pushes up the futures price and forces itself to buy more futures.” (emphasis in original). That creates a “a feedback loop; how many futures you have to buy depends on how high the futures prices are, and vice versa.” *Id.*

40. ZIV and other volatility-related ETPs rebalanced their portfolios or hedges around the same time each trading day—from late afternoon to approximately 4:15 pm Eastern (when the regular trading session of the VIX futures market closed).

41. Simultaneous rebalancing and hedges (because a fund did not know how many futures it needed to buy as explained above) created adverse pricing pressures and distorted markets. Because daily rebalancing was mandatory, and because Credit Suisse and other peers could not lose money if properly hedged, volatility-related ETP fund managers were generally “price-insensitive,” meaning that they would purchase or sell the amount of VIX futures contracts in order to rebalance their portfolios or hedge themselves, irrespective of the price of VIX futures contracts or any distortive effect on markets.

42. In addition, the timing and demand associated with rebalancing and hedging made ZIV and other ETPs vulnerable to “front-running” by sophisticated market participants. Front-running takes place when a broker or other entity enters into a trade because they have advance knowledge of a non-publicized transaction that will influence the price of the asset, resulting in a likely financial gain for the broker or other entity.

43. Sophisticated market participants, including market-makers, specialist volatility trading firms, and hedge funds, had access to proprietary data and non-public modeling capabilities, which gave them visibility into the need of ZIV and other similar ETPs rebalancing needs based on market movements during the trading day. This proprietary information enabled sophisticated market participants to start bidding up the price of VIX Futures contracts ahead of the end-of-day rebalancing—exacerbating the pricing pressure that Credit Suisse faced in conducting its rebalancing related to its ZIV hedge.

44. As the size of ZIV's and other ETP's rebalancing and hedging requirements grew, including through Defendants continuing to issue new ZIV notes, so too did the risk that the number of futures contracts that the volatility-related ETPs would need to trade shortly after the close of the market would simply be too large in relation to what the market could provide, creating a futures liquidity gap and, itself, driving prices.

45. Signs of these liquidity issues began to appear during 2017. Because of investors' crowding into volatility-related ETPs and other volatility-related investments, VIX Futures contracts began to experience larger price moves following relatively small moves in the SPX and VIX Futures became more reactive to changes in the SPX.

46. ZIV concealed and magnified these risks, which were poorly understood even by sophisticated industry participants. Investors in ZIV did not have access to non-public predictive models, sophisticated analytical tools, or the massive amounts of data (which included proprietary and non-public data) necessary to comprehend the true risks of ZIV or how it would perform in stress scenarios.

The Undisclosed Risks Materialize Causing Plaintiffs to Lose Money

47. On Monday, February 5, 2018, a liquidity gap in VIX futures suddenly materialized. On that date, the SPX fell approximately 4% amid concerns about rising bond yields and higher inflation. On a historical basis, the 4% decline was unremarkable. Percentage-wise, it was less than half the greatest single-day decline in the S&P 500 Index over the last 30 years (a 9% decline that occurred on October 15, 2008) and a fraction of the 20% decline in the S&P 500 Index that occurred on October 19, 1987.

48. By 4:00 pm Eastern (the close of regular trading for ZIV ETNs), the VIX Medium-Term Futures Index had risen approximately 12.3%, from a prior day settlement value of 11,130.55, to approximately 12,500. ZIV's share price fell a roughly equivalent 14.5%, from a prior daily close of \$85.41 per share, to \$74.54 per share as of 4:00 pm Eastern on February 5, 2018. Trading was orderly and positions in the stock, equity options, and VIX futures markets remained liquid.

49. Between 4:00 pm and 4:15 pm Eastern, ZIV and other volatility-related ETPs sought to rebalance their portfolios by purchasing hundreds of millions of dollars' worth of futures contracts in an overly crowded VIX Futures market, that market spiraled out of control in a feedback loop. The prices of the VIX Futures contracts making up SPVIXMTR rocketed over the settlement price of the prior trading day, February 2, 2018. The price of VIX Futures contracts rose, which in turn drove down ZIV's NAV, resulting in a feedback loop which required the purchase of yet more VIX Futures contracts by ZIV and other volatility related ETPs, causing ZIV's NAV to decline further, and so on.

50. Rebalancing Credit Suisse's hedge on ZIV and similar conduct by other ETPs on February 5, 2018 required the purchase of significant futures contracts. Given that other volatility-related ETPs also needed to purchase VIX futures contracts during this 15-minute

interval, it is apparent that there simply were not enough VIX futures contracts available in the market, and a liquidity gap ensued, distorting the markets and the indicative price of ZIV. The fourth, fifth, sixth and seventh month VIX Futures contracts that the underlying SPVIXMTR was meant to replicate each experienced trading volume several times their normal trading volume.

51. Insufficient VIX Futures were available to support the daily rebalancing trade associated with the SPVIXMTR in the event of likely market turbulence without severely also distorting the underlying SPVIXMTR and creating a feedback loop. This was particularly true because the positions of ZIX, XIV and similar ETPs allowed Credit Suisse and other market participants to engage in proprietary trading which would further cause the value of ZIV to diverge from the SPVIXMTR. Indeed, that is precisely what happened in February 2018. After closing at \$74.54 per ETN on February 5, 2018, ZIV opened at \$65.00 per ETN on February 6, 2018, as a result of the market imbalances described above, causing Plaintiffs and other similarly situated investors to suffer a significant loss.

52. In reaction to these and similar events, Blackrock, Inc., the world's biggest provider of exchange traded funds reiterated a call for regulation that would clearly spell out the risks associated with inverse and leveraged exchange-traded products.

53. On February 6, 2018, Nomura Holdings issued a public apology after investors in a \$300 million inverse VIX ETN known as Nomura Next Notes S&P 500 VIX Short-Term Futures Inverse Daily Return Index ETN were all but wiped out.

54. On February 9, 2019, Fidelity halted investor purchasers of various VIX related ETPs including ZIV in order to protect investors.

55. On July 10, 2018, according to a report carried on *Bloomberg*, Nomura Holdings acknowledged in a public statement that it failed to fully explain risks on its previously issued

VIX-based ETN and was seeking a settlement with investors who had been damaged through its purchase.

DEFENDANTS' MATERIALLY FALSE AND MISLEADING STATEMENTS

56. On June 30, 2017, Credit Suisse filed a prospectus supplement with the SEC on Form 424B2 for the offer and sale of the CS Inverse ETNs, which incorporated and formed part of a Form F-3 registration statement previously filed with the SEC, and which was subsequently amended by a prospectus supplement filed on January 29, 2018 (together, the “Registration Statement”). The Registration Statement was signed by defendants Thiam and Mathers.

57. The Registration Statement represented that the CS Inverse ETNs were “intended to be [a] trading tool[] for sophisticated investors to manage daily trading risks.” Similarly, the Registration Statement stated that the XIV was “designed to achieve [its] stated investment objectives on a daily basis.” Indeed, the Registration Statement represented that ZIV was suitable for a wide range of investor objectives by stating in pertinent part that:

The ETNs may be a suitable investment for you if:

- You seek an investment with a return linked to the performance of the applicable underlying Index.
- You are willing to accept the risk of fluctuations in volatility in general and in the level of the applicable underlying Index in particular.
- You are a sophisticated investor seeking to manage daily trading risk using a short-term investment, and are knowledgeable and understand the potential consequences of investing in volatility indices and of seeking inverse or leveraged investment results, as applicable.
- You believe the level of the applicable underlying Index will increase (if you invest in the Long ETNs or 2x Long ETNs) or decline (if you invest in the Inverse ETNs) by an amount, and at a time or times, sufficient to offset the sum of the Daily Investor Fees (and in the case of Early Redemption, the Early Redemption Charge) over your intended holding period of the ETNs and to provide you with a satisfactory return on your investment during the time you hold the ETNs.
- You do not seek current income from this investment.

- You do not seek a guaranteed return of your initial investment.
- You are a sophisticated investor using the ETNs to manage daily trading risks and you understand that the ETNs are designed to achieve their stated investment objectives on a daily basis, but their performance over longer periods of time can differ significantly from their stated daily objectives.
- You understand that the Daily Investor Fees and the Early Redemption Charge will reduce your return (or increase your loss, as applicable) on your investment.

58. In addition, the Registration Statement made the following risk disclosure:

Trading and other transactions by us, our affiliates, or third parties with whom we transact, in securities or financial instruments related to the ETNs and the applicable underlying Index may impair the value of your ETNs

We expect to hedge our obligations relating to the ETNs by purchasing or selling short the underlying futures, listed or over-the-counter options, futures contracts, swaps, or other derivative instruments relating to the applicable underlying Index, the VIX Index, the S&P 500® Index, the component securities of the S&P 500® Index, or the underlying futures, or other instruments linked to the applicable underlying Index, certain exchange traded notes issued by Credit Suisse, the VIX Index, the S&P 500® Index, the component securities of the S&P 500® Index, or the underlying futures, and adjust the hedge by, among other things, purchasing or selling any of the foregoing, at any time and from time to time, and to unwind the hedge by selling any of the foregoing, perhaps on or before the applicable Valuation Date. We, our affiliates, or third parties with whom we transact, may also enter into, adjust and unwind hedging transactions relating to other securities whose returns are linked to the applicable underlying Index. Any of these hedging activities may adversely affect the level of the applicable underlying Index — directly or indirectly by affecting the price of the underlying futures or listed or over-the-counter options, futures contracts, swaps, or other derivative instruments relating to the applicable underlying Index, the VIX Index, the S&P 500® Index, the component securities of the S&P 500® Index, or the underlying futures — and therefore the market value of your ETNs and the amount we will pay on your ETNs on the relevant Early Redemption Date, Acceleration Date or the Maturity Date. It is possible that we, our affiliates, or third parties with whom we transact could receive substantial returns with respect to these hedging activities while the value of your ETNs decline or become zero. Any profit in connection with such hedging activities will be in addition to any other compensation that and our affiliates receive for the sale of the ETNs, which may create an additional incentive to sell the ETNs to you.

We, our affiliates, or third parties with whom we transact may also engage in trading in the underlying futures, or listed or over-the-counter options, futures contracts, swaps, or other derivative instruments relating to the applicable underlying Index, the VIX Index, the S&P 500® Index, the component securities

of the S&P 500® Index, or the underlying futures, or instruments whose returns are linked to the applicable underlying Index, certain exchange traded notes issued by Credit Suisse, or the underlying futures or listed or over-the-counter options, futures contracts, swaps, or other derivative instruments relating to the applicable underlying Index, the VIX Index, the S&P 500® Index, the component securities of the S&P 500® Index, or the underlying futures for our or their proprietary accounts, for other accounts under our or their management or to facilitate transactions, including block transactions, on behalf of customers. Any of these activities could adversely affect the level of the applicable underlying Index — directly or indirectly by affecting the price of the underlying futures or listed or over-the-counter options, futures contracts, swaps, or other derivative instruments relating to the applicable underlying Index, the VIX Index, the S&P 500® Index, the component securities of the S&P 500® Index, or the underlying futures — and, therefore, the market value of your ETNs and the amount we will pay on your ETNs on the relevant Early Redemption Date, Acceleration Date or the Maturity Date. We may also issue, and we, our affiliates, or third parties with whom we transact may also issue or underwrite, other ETNs or financial or derivative instruments with returns linked to changes in the level of the applicable underlying Index or the underlying futures or listed or over-the-counter options, futures contracts, swaps, or other derivative instruments relating to the applicable underlying Index, the VIX Index, the S&P 500® Index, the component securities of the S&P 500® Index, or the underlying futures. By introducing competing products into the marketplace in this manner, we, our affiliates, or third parties with whom we transact could adversely affect the market value of your ETNs and the amount we will pay on your ETNs on the relevant Early Redemption Date, Acceleration Date or the Maturity Date.

59. The statements in paragraphs ¶¶57-58 above, were materially false or misleading because they misrepresented and failed to disclose that: (a) the amount of assets under management of ZIV and similar ETPs tied to daily rebalancing of risks exceeded the amount of volume that could be traded in the event of market volatility without independently adversely affecting the relationship between the value of ZIV and the SPVIXMTR; (b) SPVIXMTR, upon which ZIV was based, was subject to manipulation by sophisticated market participants; and (c) historically, ETPs had failed to replicate the performance of the underlying VIX index in times of sharply increased volatility, which had become increasingly likely.

60. Defendants also provided boilerplate warnings in the Registration Statement that its self-interested “hedging” (*i.e.*, proprietary trading) “may” or “could” affect the price of ZIV

when there were specific facts known that would adversely affect the price of ZIV in the event of such market activity:

Daily rebalancing of the leverage amount may impact trading in the underlying futures contracts

The daily rebalancing of the leverage amount of each ETN back to its target may cause us, our affiliates, or third parties with whom we transact to adjust their hedges accordingly. The trading activity associated with these hedging transactions will contribute to the trading volume of the underlying futures and may adversely affect the market price of such underlying futures.

* * *

Daily rebalancing and market volatility risk

Each ETN seeks to provide a return which is related to the daily performance of its Index (as adjusted for costs and fees). The ETNs do not attempt to, and should not be expected to, provide returns which achieve the inverse or 2x leveraged return of the Index for periods other than a single day. Each of the Inverse ETNs and 2x Long ETNs rebalances its theoretical exposure on a daily basis, increasing exposure in response to that day's gains or reducing exposure in response to that day's losses.

Daily rebalancing will impair the performance of each ETN if the underlying Index experiences volatility and such performance will be dependent on the path of daily returns during the holder's holding period. At higher ranges of volatility, there is a significant chance of a complete loss of the value of the ETNs even if the performance of the applicable underlying Index is flat. **The ETNs are designed as short-term trading vehicles for investors managing their portfolios on a daily basis.** They are not intended to be used by, and are not appropriate for, investors who intend to hold positions in an attempt to generate returns over longer periods of time.

* * *

The market price of your ETNs may be influenced by many unpredictable factors

The market value of your ETNs will fluctuate between the date you purchase them and the applicable Valuation Date. You may also sustain a significant loss if you sell the ETNs in the secondary market. In addition to others, the following factors, many of which are beyond our control, will influence the market value of your ETNs, as well as the applicable Redemption Amount:

- the level of the applicable underlying Index at any time,
- the volatility of any option or futures contracts relating to the applicable underlying Index, the VIX Index, the S&P 500® Index, the component securities of the S&P 500® Index, or the underlying futures,
- the liquidity of any option or futures contracts relating to the applicable underlying Index, the VIX Index, the S&P 500® Index, the component securities of the S&P 500® Index, or the underlying futures,
- economic, financial, regulatory, political, judicial, military and other events that affect stock markets generally, the applicable underlying Index, the equity securities included in the S&P 500® Index, the S&P 500® Index, the VIX Index or the relevant futures contracts on the VIX Index,
- supply and demand for the ETNs in the secondary market, including but not limited to, inventory positions with any market maker or other person or entity who is trading the ETNs (supply and demand for the ETNs will be affected by the total issuance of ETNs, and we are under no obligation to issue additional ETNs to increase the supply),
- interest and yield rates and rate spreads in the markets,
- the time remaining until your ETNs mature, and
- the actual or perceived creditworthiness of Credit Suisse.

61. Despite a burgeoning amount of ETPs, price-insensitive rebalancing, and prior examples of hedging activities distorting markets (e.g., ¶ 32) , Defendants failed to disclose the “feedback loop” created by ETPs and, instead, stated in the Registration Statement that they ***“have no reason to believe that our or their hedging activities will have a material impact on the level of the applicable underlying Index, there can be no assurance that the level of the applicable underlying Index will not be affected.”***

62. The statements in paragraph ¶¶6060-61, above, were materially false or misleading because they misrepresented and failed to disclose that: (a) their hedging activity **would**, not just “could” “affect the value of the Index, and accordingly the value of the ETNs”; (b) “daily rebalancing of the leverage amount of each ETN back to its target” **would**, not just “may”, result in Credit Suisse “adjust[ing] their hedges”; (c) Credit Suisse, along with other issuers, had sold an unmanageable amount of volatility related ETPs which created an insufficiently liquid VIX futures market at times it rebalanced its hedges, for which it was price insensitive; (d) as a result of their adjustments in hedges, a feedback loop would occur which would result in a quick and artificial decline in ZIV’s NAV; (v) consequently, a central “factor” which affected the “market price of [ZIV] ETNs” was Credit Suisse’s own actions; and therefore, (vi) ZIV was not appropriate even for investors who “for investors managing their portfolios on a daily basis.”

63. In addition to the false and misleading statements alleged herein, Defendants also violated the affirmative disclosure requirements imposed by Item 303 of SEC Regulation S-K, 17 C.F.R. §229.303(a)(3)(ii) (“Item 303”), requiring issuers to “[d]escribe any known trends or uncertainties that have had or that the registrant reasonably expects will have a material favorable or unfavorable impact on net sales or revenues or income from continuing operations.”

64. Defendants also violated Item 105 of SEC Regulation S-K, 17 C.F.R. §229.105 (“Item 105”), which requires, in the “Risk Factors” section of registration statements and prospectuses, “a discussion of the most significant factors that make an investment in the registrant or offering speculative or risky” and requires each risk factor to “adequately describe[] the risk.”

65. Defendants violated the affirmative disclosure duties imposed by Item 303 and by Item 105 by failing to disclose that, at the time the Registration Statement was issued: (i) the growth of XIV, ZIV and other volatility-related ETPs linked to the SPVIXMTR and SPVIXSTR had pushed the size of their potential rebalancing requirements to unprecedented levels; and (b) as such, even a relatively moderate increase in volatility would lead to a VIX Futures liquidity gap, as ZIV and other volatility-related ETPs rebalanced their portfolios in an overly-crowded VIX Futures market during the same 15-minute interval—thereby causing the prices of VIX Futures contracts to dramatically increase in price.

CLASS ACTION ALLEGATIONS

66. Plaintiffs bring this action as a class action pursuant to Federal Rule of Civil Procedure 23 on behalf of a class consisting of all persons or entities who purchased or acquired ZIV pursuant or otherwise traceable to the Registration Statement and were damaged thereby (the “Class”). Excluded from the Class are defendants, their agents, officers and directors, and any entity in which defendants have or had a controlling interest.

67. The members of the Class are so numerous that joinder of all members is impracticable. According to the Registration Statement, 2.498 million ZIV ETNs were issued and outstanding as of January 26, 2018. While the exact number of Class members is unknown to Plaintiffs at this time and can only be ascertained through appropriate discovery, Plaintiffs believe that there are at least hundreds of members in the proposed Class. Record owners and other members of the Class may be identified from records maintained by defendants or transfer agent(s) or broker dealers for ZIV and may be notified of the pendency of this action by mail, using the form of notice similar to that customarily used in securities class actions.

68. Plaintiffs' claims are typical of the claims of the members of the Class as all members of the Class are similarly affected by defendants' wrongful conduct in violation of federal law, as complained of herein.

69. Plaintiffs will fairly and adequately protect the interests of the members of the Class and has retained counsel competent and experienced in class and securities litigation.

70. Common questions of law and fact exist as to all members of the Class and predominate over any questions solely affecting individual members of the Class. Among the questions of law and fact common to the Class are:

- (a) whether defendants violated the Securities Act in the statements made in the Registration Statement;
- (b) whether defendants Thiam and Mathers are control persons of Credit Suisse within the meaning of the Securities Act; and
- (c) to what extent the members of the Class have sustained damages and the proper measure of damages.

71. A class action is superior to all other available methods for the fair and efficient adjudication of this controversy since joinder of all members is impracticable. Furthermore, as the damages suffered by individual Class members may be relatively small, the expense and burden of individual litigation make it impossible for members of the Class to individually redress the wrongs done to them. There will be no difficulty in the management of this action as a class action.

COUNT I

Violation of Section 11 of the Securities Act Against Defendants

72. Plaintiffs repeat and reallege the foregoing paragraphs by reference.

73. This Claim is brought pursuant to §11 of the Securities Act, 15 U.S.C. §77k, against all defendants.

74. This Count does not sound in fraud. This Count expressly disavows any allegations of fraud and is based solely upon Defendants' failure to disclose material adverse facts. Plaintiffs do not allege that the defendants had fraudulent intent, which is not an element of a §11 claim.

75. The Registration Statement was inaccurate and misleading, contained untrue statements of material fact, omitted to state other facts necessary to make the statements made not misleading, and omitted to state material facts required to be stated therein.

76. Credit Suisse is the registrant for all ZIV sold pursuant to the Registration Statement. As the issuer of ZIV, Credit Suisse is strictly liable to Plaintiffs and the Class for the misstatements and omissions in the Registration Statement.

77. Each of the Defendants was responsible for the contents and dissemination of the Registration Statement. In addition, defendants Thiam and Mathers signed the Registration Statement.

78. None of the Defendants named herein made a reasonable investigation or possessed reasonable grounds for the belief that the statements contained in the Registration Statement were true and without omissions of any material facts and were not misleading.

79. By reason of the conduct alleged herein, each defendant violated, or controlled a person who violated, §11 of the Securities Act.

80. Plaintiff and the Class purchased ZIV pursuant to the Registration Statement.

81. Plaintiff and the Class have sustained damages. The value of ZIV has declined substantially subsequent to, and due to, Defendants' violations.

82. At the time of their purchases of ZIV, plaintiff and other Class members were without knowledge of the facts concerning the wrongful conduct alleged herein. Less than one year elapsed from the time that plaintiff discovered or reasonably could have discovered the facts upon which this Complaint is based to the time that plaintiff filed this Action. Less than three years have elapsed between the time that the securities upon which this Count is brought were offered to the public and the time plaintiff filed this Action.

COUNT II

Violation of Section 15 of The Securities Act Against the Individual Defendants

83. Plaintiffs repeat and reallege the foregoing paragraphs by reference.

84. Each of the Individual Defendants was a control person within the meaning of Section 15 of the Securities Act.

85. The Individual Defendants were each control persons of Credit Suisse by virtue of their positions as directors or senior officers of Credit Suisse and CSSU. The Individual Defendants each had a series of direct or indirect business or personal relationships with other directors or officers or major shareholders of Credit Suisse. The Individual Defendants signed the Registration Statement and were responsible for its contents and held themselves out to investors as among those most knowledgeable about ZIV.

86. Individual Defendants' positions made them privy to and provided them with actual knowledge of the material facts concealed from Plaintiffs and the Class.

87. The defendants named herein each were culpable participants in the violations of Section 15 of the Securities Act alleged in the Count above, based on their having signed or authorized the signing of the Registration Statement, constructing and managing ZIV, creating and disseminating the Registration Statement, marketing and selling ZIV or having otherwise

participated in the process that allowed the offer and sale of ZIV to investors be successfully completed.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs pray for relief and judgment, as follows:

- A. Determining that this action is a proper class action and certifying Plaintiffs as class representatives and Plaintiffs' counsel as Lead Counsel under Federal Rule of Civil Procedure 23;
- B. Awarding damages, to the maximum extent permitted by law, in favor of Plaintiffs and the other Class members against all defendants, jointly and severally, in an amount to be proven at trial, including interest thereon;
- C. Awarding Plaintiffs and the Class their reasonable costs and expenses incurred in this action, including counsel fees and expert fees; and
- D. Such equitable, injunctive or other relief as deemed appropriate by the Court.

DEMAND FOR TRIAL BY JURY

Plaintiffs demand a trial by jury of all issues so triable.

DATED: August 20, 2019

Respectfully submitted,

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